

## REMARKS

Applicant has amended claims 38 and 44, and have cancelled claims 1-37 and 56-57, during prosecution of this patent application. Applicant is not conceding in this patent application that the subject matter encompassed by said amended and cancelled claims are not patentable over the art cited by the Examiner, since the claim amendments and cancellations are only for facilitating expeditious prosecution of this patent application. Applicant respectfully reserves the right to pursue the subject matter encompassed by said amended and cancelled claims, and to pursue other claims, in one or more continuations and/or divisional patent applications.

The Examiner rejected claims 38-55 under 35 U.S.C. § 101.

The Examiner rejected claims 38-39 and 42 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman et al. (US Patent No. 6,400,272) (hereinafter Holtzman) in view of Scheidt et al. (US Pre-Grant Publication No. 2002/0184509) (hereinafter Scheidt).

The Examiner rejected claim 40-41 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Honarvar et al. (Hereinafter Honarvar) (US Pre-Grant Publication 2003/0154406).

The Examiner rejected claim 43 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Frieden et al. (US Pre-Grant Publication No. 2003/0163446) (hereinafter Frieden).

The Examiner rejected claims 44 and 50-55 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt, and further in view of Nerlikar (US Patent No. 5,629,981).

The Examiner rejected claim 45 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar, and further in view of Laval (US Patent No. 6,173,209) (hereinafter Laval) and further in view of Ott (US Pre-Grant Publication No. US 2003/0052539).

The Examiner rejected claims 46-47 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar, and further in view of Byford (US Patent No. 6,581,161).

The Examiner rejected claims 48-49 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar, and further in view of Byford, and further in view of Honarvar.

Applicant respectfully traverses the§ 101 and § 103 rejections with the following arguments.

**35 U.S.C. § 101: Claims 38-55**

The Examiner rejected claims 38-55 under 35 U.S.C. § 101.

The Examiner argues: “Claims 38-55 are rejected under 35 U.S.C. 101 based on Supreme Court precedent and recent Federal Circuit decisions, a 35 U.S.0 § 101 process must (1) be tied to a particular machine or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. *In re Bilski et al*, 88 USPQ 2d 1385 CAFC (2008); *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780,787-88 (1876).”.

In response, Applicant respectfully contends that the “scanning” step in claim 38 is performed by a particular machine, namely a RFID reader, in compliance with the machine prong of the machine-or-transformation test set forth by the Federal Circuit in *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (en banc).

Accordingly, Applicant respectfully requests that the rejection of claims 38-55 under 35 U.S.C. § 101 be withdrawn.

**35 U.S.C. § 103(a): Claims 38-39 and 42**

The Examiner rejected claims 38-39 and 42 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman et al. (US Patent No. 6,400,272) (hereinafter Holtzman) in view of Scheidt et al. (US Pre-Grant Publication No. 2002/0184509) (hereinafter Scheidt).

Applicant respectfully contends that claim 38 is not unpatentable over Holtzman in view of Scheidt, because Holtzman in view of Scheidt does not teach or suggest each and every feature of claim 38.

For example, Holtzman in view of Scheidt does not teach or suggest the feature:  
“scanning a user to read N Radio Frequency Identification (RFID) tags respectively embedded in N objects being carried by the user, each tag of the N tags comprising a tag identifier of said each tag, said N being at least 2;

comparing the N tags read by the RFID reader with M tags in a registered record of data, said registered record comprising a reference to the user, each tag of the M tags comprising a tag identifier, said M being at least N; and

permitting access by the user to a resource if said comparing has determined that the tag identifiers in the M tags comprise the tag identifiers in the N tags read by the RFID reader”  
(emphasis added).

Applicant respectfully contends that Holtzman in view of Scheidt does not disclose “N objects being carried by the user, ... said N being at least 2; ... M tags in a registered record of data, ... said M being at least N” in the preceding feature of claim 38.

The Examiner argues: “Holtzman does not specifically teach the method of permitting access by a user to a resource if the N tags presented by the user is a subset of M tags in the

record, where said M is at least N (N being at least 2).... However, Scheidt teaches an invention where a user is permitted access to a resource based on a combination of RFID tokens (*paragraph [0013], lines 1-10*).... It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Holtzman to include access criteria in which a user is permitted access if the user is in possession of a plurality of tags which correspond to the record of Scheidt because it would provide a stronger user identification process than relying on one tag to permit access to a resource, as indicated by Scheidt (*paragraph [0032], lines 8-10*)."

In response, Applicant respectfully contends that Scheidt does not disclose a user carrying at least two RFID tokens for permitting the user to access a system. The Examiner cited Scheidt, Par. [0013], lines 1-10 which specifically recites the use of "token-based data" in combination with other factors for permitting a user to access a system, which does not identify a user carrying at least two RFID tokens. The Examiner also cited Scheidt, Par. [0032], lines 8-10 which specifically recites the use of "a token" in combination with other factors for permitting a user to access a system, which very clearly identifies exactly one RFID token carried by the user.

More specifically, Scheidt, Par. [0032], lines 11-12 recites: "The present invention provides a method of validating a user for access to a system based on at least two of these factors." However only one of the factors is "a token" (Scheidt, Par. [0032], line 4) which is one token and not at least two tokens carried by the user.

In "Response to Arguments", the Examiner states: "applicant is directed to Scheidt (*paragraph [0066]*), whereby the reference teaches using two or more tokens for permitting access to a system".

In response, Applicant notes that Scheidt. Par. [0066] recites: “two tokens can be required for certain levels of access, to enforce a rule that ***more than one person*** having a specific authority be present before allowing a particular access to occur” (emphasis added), which does not disclose a user (i.e., ***one user***) carrying at least two tokens for permitting access by the user to a system.

In summary, the Examiner has not cited any prior art that discloses a user (i.e., one user) carrying at least two RFID tags as required in the preceding feature of claim 38.

Based on the preceding arguments, Applicant respectfully maintains that claim 38 is not unpatentable over Holtzman in view of Scheidt, and that claim 38 is in condition for allowance. Since claims 39, 40 and 42 depend from claim 38, Applicant contends that claims 39, 40 and 42 are likewise in condition for allowance.

In addition with respect to claim 39, Holtzman in view of Scheidt does not disclose the feature: “M tags in a registered record of data, ... wherein M = N”.

The Examiner argues: “Scheidt teaches using a combination of RFID tokens to authenticate a user requesting access to a resource. Merriam-Webster defines *a combination* as “any subset of a set considered without regard to order within the subset.” As such, Scheidt teaches access criteria comprising subsets of any size, including all M elements of a set of size M, or any subset thereof. In the former case, the presence of all of the tags in the registered record is necessary to permit access (M = N)”.

In response, Applicant asserts that the Examiner is referring to any combination of the multiple factors delineated in Scheidt, Par. [0032]. However, the only factor of these multiple

factors that is relevant to claim 39 is the factor of “a token” (Scheidt, Par. [0032], line 4) which is only one token and is therefore in violation of the requirement of “N objects being carried by the user, ... said N being at least 2”. There is no disclosure in Scheidt that the totality of such tokens identified in a record of data (M) is equal to the number of objects carried by the user (N).

Therefore, Holtzman in view of Scheidt does not disclose the preceding feature of claim 39.

In addition with respect to claim 42, Holtzman in view of Scheidt does not disclose the feature: “providing a checksum mechanism for combining identification information in the N tag identifiers”.

The Examiner argues: “As per claim 42, Holtzman and Scheidt teach the method of claim 38, but do not specifically teach providing a checksum mechanism for identifying the N tag identifiers.... However, Scheidt further teaches combining identification information from a combination of user-provided factors (which may comprise token-based data) into one value, termed the Profile Key Encryption Key (PKEK). The process by which this value is generated is repeatable, and Scheidt teaches that there should be a way of verifying the integrity of the value upon regeneration (*paragraph [0033]*).... It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Holtzman further with that of Scheidt in order to provide a checksum mechanism for combining identification information in the N tag identifiers. One would have been motivated to do so as this would increase efficiency of the scanning and comparing means while also decreasing the likelihood of errors.... It should

be noted that it is well known in the art that such a verification method could be done using a checksum mechanism.”

In response, Applicant asserts that notes that Scheidt, Par. [0033] does not disclose the use of a checksum for combining identification information in the N tag identifiers, as required by the preceding feature of claim 42.

Furthermore, Applicant respectfully challenges the Examiner’s contention that “it is well known in the art that such a verification method could be done using a checksum mechanism”. Applicant assert that the Examiner has not cited any prior art allegedly disclosing that it is known to use a checksum mechanism for combining identification information in the N tag identifiers. See Modern Dictionary of Electronics (6<sup>th</sup> ed. 1997) which describes the following well-known use of a checksum: “A value which is the arithmetic sum of all the bytes in a program or a program segment”.

In “Response to Arguments”, the Examiner argues: “absent any specific features, checksum is a generic method of verifying if the data has been tampered. The specification does not disclose any specific features with regards to this “checksum mechanism.” As such, Scheidt teaches the feature of a “checksum mechanism for combining identification information in the N tag identifiers” as disclosed above.”

In response, Applicant asserts that a checksum is a mathematical function such as “the arithmetic sum of all the bytes in a program or a program segment” cited *supra*. The Examiner’s allegation that “checksum is a generic method of verifying if the data has been tampered” is incorrect. The Examiner has not provided evidence to support the Examiner’s allegation that “checksum is a generic method of verifying if the data has been tampered”. More specifically,

the Examiner has not cited a definition of “checksum” that permits one to conclude that Scheidt discloses a checksum for combining identification information in the N tag identifiers, as required by the preceding feature of claim 42.

Therefore, Holtzman in view of Scheidt does not disclose the preceding feature of claim 42.

**35 U.S.C. § 103(a): Claims 40-41**

The Examiner rejected claim 40-41 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Honarvar et al. (Hereinafter Honarvar) (US Pre-Grant Publication 2003/0154406).

Since claims 40-41 depend from claim 38, which Applicant has argued *supra* to not be unpatentable over Holtzman in view of Scheidt under 35 U.S.C. §103(a), Applicant maintains that claims 40-41 are likewise not unpatentable over Holtzman in view of Scheidt under 35 U.S.C. §103(a).

**35 U.S.C. § 103(a): Claim 43**

The Examiner rejected claim 43 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Frieden et al. (US Pre-Grant Publication No. 2003/0163446) (hereinafter Frieden).

Since claim 43 depends from claim 38, which Applicant has argued *supra* to not be unpatentable over Holtzman in view of Scheidt under 35 U.S.C. §103(a), Applicant maintains that claim 43 is likewise not unpatentable over Holtzman in view of Scheidt and further in view of Frieden under 35 U.S.C. §103(a).

In addition with respect to claim 43, Holtzman in view of Scheidt does not disclose the feature: “N objects being carried by the user, ... M tags in a registered record of data, ... wherein after said scanning the method further comprises sorting the tag identifiers in the N tags read by the RFID reader”.

The Examiner argues: “Frieden teaches sorting a set of children within a single record (*paragraph [0002]*).”

In response, Applicant respectfully contends that sorting a set of children within a single record in Frieden is analogous to sorting M tags in a registered record of data, but is not analogous to sorting the N tags embedded in the N objects carried by the user after the N tags are scanned by a RFID reader”. Therefore, Frieden’s teaching of sorting a set of children within a single record is not a disclosure of “sorting the tag identifiers in the N tags [carried by the user and ] read by the RFID reader”.

Therefore, Holtzman in view of Scheidt and further in view of Honarvar does not disclose the preceding feature of claim 43.

**35 U.S.C. § 103(a): Claims 44 and 50-55**

The Examiner rejected claims 44 and 50-55 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt, and further in view of Nerlikar (US Patent No. 5,629,981).

Since claims 44 and 50-55 depend from claim 38, which Applicant has argued *supra* to not be unpatentable over Holtzman in view of Scheidt under 35 U.S.C. §103(a), Applicant maintains that claims 44 and 50-55 are likewise not unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar under 35 U.S.C. §103(a).

In addition with respect to claim 50, Holtzman in view of Scheidt and further in view of Nerlikar does not disclose the feature: “wherein a tag identifier in a first tag of the N tags includes an indication of a type of the object in which the first tag is embedded”.

The Examiner argues: “As per claim 50, Holtzman further teaches a method wherein a tag identifier in a first tag of the N tags includes an indication of a type of the object in which the first tag is embedded (*column 5, lines 15-16, the tag identifier can be based on the identity of the token, which is an object that houses the RFID tag.*)”

In response, Applicant respectfully contends that Holtzman’s disclosure of a tag identifier based on the identity of the token is not a disclosure of a tag identifier that includes an indication of a type of the token in which the tag is embedded. Holtzman, col. 3, line 21 states the word “identifier” mean a “unique digital code”, which is not an indication of a type of the token in which the tag is embedded.

In fact, Holtzman, col. 6, lines 5-7 recite: “In one embodiment, the signals received from the reader interface 84 include a token identifier. In another embodiment, the signals received from the reader interface 84 include the *type of token associated with the identifier*” (emphasis added). Thus, Holtzman discloses that the *type of token* may be identified in a signal from the reader and thus not from the tag identifier.

Therefore, Holtzman in view of Scheidt and further in view of Nerlikar does not disclose the preceding feature of claim 50.

In addition with respect to claim 54, Holtzman in view of Scheidt and further in view of Nerlikar does not disclose the feature: “wherein an object of the N objects comprises a watch or a phone”.

The Examiner argues: “As per claim 54, Holtzman further teaches a method wherein an object of the N objects comprises a watch or a phone (*column 3, lines 8-12, a commonplace article*). It is well known in the art that watches and phones are commonplace articles that may easily incorporate RFID tags.”

In response, Applicant respectfully contends that the scope of “commonplace article” is very broad and may include hundreds if not thousands of different articles. Claim 54, on the other hand, has a much narrower scope that is limited to “a watch or a phone”, which Holtzman, col. 3, lines 8-12 does not disclose. In effect, the Examiner is unable to find any prior art allegedly disclosing a phone or a watch having a RFID tag embedded therein.

Applicant asserts that an attempt to show that it is obvious to combine elements to disclose the claimed invention starts with elements that are known in the prior art and then seeks

to demonstrate that it obvious to combine the elements. *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) ("When it first established the requirement of demonstrating a teaching, suggestion, or motivation to combine **known elements** in order to show that the combination is obvious, the Court of Customs and Patent Appeals captured a helpful insight. See Application of Bergel, 292 F. 2d 955, 956-957 (1961)") (emphasis added).

Insight as to why all elements of a claim must be known to reject the claim on grounds of obvious is provided in *In re Shetty*, 566 F.2d 81, 86, 195 USPQ 753, 756-57 (C.C.P.A. 1977) (reversing the Board's rejection of a claim based on alleged inherency under 35 U.S.C. 103 of a method to curb appetite, and stating: "Obviousness cannot be predicated on what is unknown).""

Thus, the Examiner attempt to modify Holtzman which a feature that is unknown (i.e., a phone or a watch having a RFID tag embedded therein) in the prior art is legally impermissible.

Therefore, Holtzman in view of Scheidt and further in view of Nerlikar does not disclose the preceding feature of claim 54.

**35 U.S.C. § 103(a): Claim 45**

The Examiner rejected claim 45 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar, and further in view of Laval (US Patent No. 6,173,209) (hereinafter Laval) and further in view of Ott (US Pre-Grant Publication No. US 2003/0052539).

Since claim 45 depends from claim 38, which Applicant has argued *supra* to not be unpatentable over Holtzman in view of Scheidt under 35 U.S.C. §103(a), Applicant maintains that claim 45 is likewise not unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar and further in view of Laval and further in view of Ott under 35 U.S.C. §103(a).

### **35 U.S.C. § 103(a): Claims 46-47**

The Examiner rejected claims 46-47 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar, and further in view of Byford (US Patent No. 6,581,161).

Since claims 46-47 depend from claim 38, which Applicant has argued *supra* to not be unpatentable over Holtzman in view of Scheidt under 35 U.S.C. §103(a), Applicant maintains that claims 46-47 are likewise not unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar and further in view of Byford under 35 U.S.C. §103(a).

In addition with respect to claim 46, Holtzman in view of Scheidt and further in view of Nerlikar and further in view of Byford does not disclose the feature: “wherein prior to said scanning the method further comprises authenticating the user during a registration process in which the registered record is generated”.

The Examiner argues: “As per claims 46-47, Holtzman, Scheidt, and Nerlikar teach the method of claim 44 as applied above, but do not specifically teach the method of authenticating the user during a registration process in which the registered record is generated... However, Byford teaches that a system for controlling access would feature secure verification means for verifying the user's identity in addition to having an encryption means for encrypting communications between a portable apparatus, a server means, and access control means (*column 2, lines 45-49; lines 64-67*).”

In response, Applicant notes that Byford, col. 2, lines 45-49 and 64-67 recite: “The system may advantageously further comprise secure verification means for verifying said user's

identity, and also advantageously may have encryption means for encrypting communications between said portable communicating means, said server means and said access control means. ... It is advantageous also to have portable apparatus as described, further comprising secure verification means for verifying said user's identity, and preferably also comprising encryption means for encrypting communications."

Applicant asserts that the preceding quotes from Byford, col. 2, lines 45-49 and 64-67 does not mention anything relating to "a registration process in which the registered record is generated" and therefore does not disclose the feature: "wherein prior to said scanning the method further comprises authenticating the user during a registration process in which the registered record is generated".

Therefore, Holtzman in view of Scheidt and further in view of Nerlikar and further in view of Byford does not disclose the preceding feature of claim 46.

In addition with respect to claim 47, Holtzman in view of Scheidt and further in view of Nerlikar and further in view of Byford does not disclose the feature: "wherein said authenticating the user is performed utilizing an asymmetric key pair, and wherein the key pair consists of a private key and a public key".

The Examiner argues: "As per claims 46-47, Holtzman, Scheidt, and Nerlikar teach the method of claim 44 as applied above, but do not specifically teach the method of authenticating the user during a registration process in which the registered record is generated... However, Byford teaches that a system for controlling access would feature secure verification means for verifying the user's identity in addition to having an encryption means for encrypting

communications between a portable apparatus, a server means, and access control means (*column 2, lines 45-49; lines 64-67*).”

In response, Applicant notes that Byford, col. 2, lines 45-49 and 64-67 recite: “The system may advantageously further comprise secure verification means for verifying said user's identity, and also advantageously may have encryption means for encrypting communications between said portable communicating means, said server means and said access control means. ... It is advantageous also to have portable apparatus as described, further comprising secure verification means for verifying said user's identity, and preferably also comprising encryption means for encrypting communications.”

Applicant asserts that the preceding quotes from Byford, col. 2, lines 45-49 and 64-67 does not mention anything relating to “an asymmetric key pair, and wherein the key pair consists of a private key and a public key” and therefore does not disclose the feature: “wherein said authenticating the user is performed utilizing an asymmetric key pair, and wherein the key pair consists of a private key and a public key”.

Therefore, Holtzman in view of Scheidt and further in view of Nerlikar and further in view of Byford does not disclose the preceding feature of claim 47.

**35 U.S.C. § 103(a): Claims 48-49**

The Examiner rejected claims 48-49 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar, and further in view of Byford, and further in view of Honarvar.

Since claims 48-49 depend from claim 38, which Applicant has argued *supra* to not be unpatentable over Holtzman in view of Scheidt under 35 U.S.C. §103(a), Applicant maintains that claims 48-49 are likewise not unpatentable over Holtzman in view of Scheidt and further in view of Nerlikar and further in view of Honarvar under 35 U.S.C. §103(a).

In addition with respect to claim 48, Holtzman in view of Scheidt and further in view of Nerlikar and further in view of Byford, and further in view of Honarvar does not disclose the feature: “wherein prior to said scanning the method further comprises generating a digital certificate having data therein, and wherein the data in the digital certificate comprises a name of the user and the identifiers in the M tags”.

The Examiner argues: “It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Holtzman, Scheidt, and Nerlikar with that of Honarvar to generate a digital certificate containing user authentication data, prior to scanning. One would have been motivated to do so in order to dynamically control a data sources (*paragraph [0029]*) from which access criteria/rules for authentication are generated at a later time.”

In response, Applicant asserts that it is not obvious to modify Holtzman “to generate a digital certificate containing user authentication data, prior to scanning ... in order to

dynamically control a data sources ... from which access criteria/rules for authentication are generated at a later time.” Holtzman’s invention is specific to the use of RFID tags for controlling access to data (Holtzman, col. 5, lines 6-14) and would therefore not benefit from generating a digital certificate for controlling access to data. To generate a digital certificate would add unnecessary cost and complexity to Holtzman’s invention and is therefore not obvious.

Therefore, Holtzman in view of Scheidt and further in view of Nerlikar and further in view of Byford, and further in view of Honarvar does not disclose the preceding feature of claim 48.

## CONCLUSION

Based on the preceding arguments, Applicant respectfully believes that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicant invites the Examiner to contact Applicant's representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 09-0457 (IBM).

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